Exploring Aeronautics			
2008 Mathematics			
Grade Level Articulations			
Arizona Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Wings(177-208)	AZ	MA.5.4.4.PO 4	Solve problems involving the area of 2-dimensional figures by using the properties of parallelograms and triangles.
The Resource Center	AZ	MA.5.1.1.PO 3	Locate integers on a number line.
The Resource Center	AZ	MA.5.1.1.PO 4	Compare and order positive fractions, decimals, and percents.
Science of Flight	AZ	MA.5.2.1.PO 1	Collect, record, organize, and display data using multi-bar graphs or double line graphs.
Science of Flight	AZ	MA.5.2.1.PO 2	Formulate and answer questions by interpreting and analyzing displays of data, including multi-bar graphs or double line graphs.
Science of Flight	AZ	MA.5.5.2.PO 6	Summarize mathematical information, explain reasoning, and draw conclusions.
Science of Flight	AZ	MA.5.5.2.PO 8	Make and test conjectures based on data or information collected from explorations and experiments.
Integrating with Aeronautics	AZ	MA.5.1.1.PO 3	Locate integers on a number line.
Integrating with Aeronautics	AZ	MA.5.1.1.PO 4	Compare and order positive fractions, decimals, and percents.
Integrating with Aeronautics	AZ	MA.5.1.1.PO 5	Use ratios and unit rates to model, describe and extend problems in context.
Integrating with Aeronautics	AZ	MA.5.1.2.PO 4	Apply the associative, commutative, and distributive properties to solve numerical problems.
Integrating with Aeronautics	AZ	MA.5.1.3.PO 1	Make estimates appropriate to a given situation or computation with whole numbers, fractions, and decimals.
Scientific Method(124-144)	AZ	MA.5.2.1.PO 1	Collect, record, organize, and display data using multi-bar graphs or double line graphs.
Scientific Method(124-144)	AZ	MA.5.2.1.PO 2	Formulate and answer questions by interpreting and analyzing displays of data, including multi-bar graphs or double line graphs.
Scientific Method(124-144)	AZ	MA.5.2.1.PO 3	Use mean, median, mode, and range to analyze and describe the distribution of a given data set.
Scientific Method(124-144)	AZ	MA.5.2.3.PO 1	Analyze relationships among representations and make connections to the multiplication principle of counting.
Scientific Method(124-144)	AZ	MA.5.5.2.PO 6	Summarize mathematical information, explain reasoning, and draw conclusions.
Exploring Aeronautics			
2008 Mathematics			
Grade Level Articulations			
Arizona Mathematics			
Grade 6			

Activity/Lesson	State	Standards	
The Resource Center	AZ	MA.6.1.1.PO 4	Compare and order integers; and positive fractions, decimals, and percents.
The Resource Center	AZ	MA.6.1.3.PO 1	Use benchmarks as meaningful points of comparison for rational numbers.
Science of Flight	AZ	MA.6.2.1.PO 2	Formulate and answer questions by interpreting, analyzing, and drawing inferences from displays of data, including histograms and stem-and-leaf plots.
Science of Flight	AZ	MA.6.2.2.PO 1	Use data collected from multiple trials of a single event to form a conjecture about the theoretical probability.
Science of Flight	AZ	MA.6.5.2.PO 7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
Science of Flight	AZ	MA.6.5.2.PO 8	Make and test conjectures based on information collected from explorations and experiments.
Integrating with Aeronautics	AZ	MA.6.1.1.PO 5	Express that a number's distance from zero on the number line is its absolute value.
Integrating with Aeronautics	AZ	MA.6.1.3.PO 2	Make estimates appropriate to a given situation and verify the reasonableness of the results.
Integrating with Aeronautics	AZ	MA.6.2.1.PO 1	Solve problems by selecting, constructing, and interpreting displays of data, including histograms and stem-and-leaf plots.
Integrating with Aeronautics	AZ	MA.6.2.1.PO 2	Formulate and answer questions by interpreting, analyzing, and drawing inferences from displays of data, including histograms and stem-and-leaf plots.
Integrating with Aeronautics	AZ	MA.6.3.3.PO 1	Use an algebraic expression to represent a quantity in a given context.
Scientific Method(124-144)	AZ	MA.6.2.1.PO 1	Solve problems by selecting, constructing, and interpreting displays of data, including histograms and stem-and-leaf plots.
Scientific Method(124-144)	AZ	MA.6.2.1.PO 2	Formulate and answer questions by interpreting, analyzing, and drawing inferences from displays of data, including histograms and stem-and-leaf plots.
Scientific Method(124-144)	AZ	MA.6.2.1.PO 3	Use extreme values, mean, median, mode, and range to analyze and describe the distribution of a given data set.
Scientific Method(124-144)	AZ	MA.6.2.2.PO 1	Use data collected from multiple trials of a single event to form a conjecture about the theoretical probability.
Scientific Method(124-144)	AZ	MA.6.5.2.PO 1	Analyze a problem situation to determine the question(s) to be answered.
Exploring Aeronautics			
2008 Mathematics			
Grade Level Articulations			
Arizona Mathematics			
Grade 7			

Activity/Lesson	State	Standards	
The Resource Center	AZ	MA.7.1.1.PO 3	Compare and order rational numbers using various models and representations.
Science of Flight	AZ	MA.7.5.2.PO 7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
Integrating with Aeronautics	AZ	MA.7.1.1.PO 1	Recognize and convert between expressions for positive and negative rational numbers, including fractions, decimals, percents, and ratios.
Integrating with Aeronautics	AZ	MA.7.1.1.PO 3	Compare and order rational numbers using various models and representations.
Integrating with Aeronautics	AZ	MA.7.1.2.PO 2	Solve problems with rational numbers and appropriate operations using exact answers or estimates.
Integrating with Aeronautics	AZ	MA.7.1.3.PO 2	Make estimates appropriate to a given situation.
Integrating with Aeronautics	AZ	MA.7.2.1.PO 2	Interpret trends in a data set, estimate values for missing data, and predict values for points beyond the range of the data set.
Scientific Method(124-144)	AZ	MA.7.2.1.PO 1	Solve problems by selecting, constructing, and interpreting displays of data including multi-line graphs and scatterplots.
Scientific Method(124-144)	AZ	MA.7.2.1.PO 2	Interpret trends in a data set, estimate values for missing data, and predict values for points beyond the range of the data set.
Scientific Method(124-144)	AZ	MA.7.5.2.PO 7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
Exploring Aeronautics			
2008 Mathematics			
Grade Level Articulations			
Arizona Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
The Resource Center	AZ	MA.8.1.1.PO 1	Compare and order real numbers including very large and small integers, and decimals and fractions close to zero.
The Resource Center	AZ	MA.8.1.3.PO 2	Estimate the location of rational and common irrational numbers on a number line.
Science of Flight	AZ	MA.8.5.2.PO 7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
Integrating with Aeronautics	AZ	MA.8.1.1.PO 1	Compare and order real numbers including very large and small integers, and decimals and fractions close to zero.
Integrating with Aeronautics	AZ	MA.8.4.1.PO 4	Use the Pythagorean Theorem to solve problems.

Integrating with Aeronautics	AZ	MA.8.4.3.PO 2	Use the Pythagorean Theorem to find the distance between two points in the coordinate plane.
Integrating with Aeronautics	AZ	MA.8.4.4.PO 2	Solve geometric problems using ratios and proportions.
Integrating with Aeronautics	AZ	MA.8.5.2.PO 10	Solve logic problems involving multiple variables, conditional statements, conjectures, and negation using words, charts, and pictures.
Integrating with Aeronautics	AZ	MA.8.5.2.PO 13	Verify the Pythagorean Theorem using a valid argument.
Scientific Method(124-144)	AZ	MA.8.2.1.PO 4	Determine whether information is represented effectively and appropriately given a graph or a set of data by identifying sources of bias and compare and contrast the effectiveness of different representations of data.
Scientific Method(124-144)	AZ	MA.8.2.1.PO 5	Evaluate the design of an experiment.
Scientific Method(124-144)	AZ	MA.8.5.2.PO 7	Isolate and organize mathematical information taken from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
Scientific Method(124-144)	AZ	MA.8.5.2.PO 12	Make, validate, and justify conclusions and generalizations about linear relationships.